CLAIM AMENDMENTS

Please amend the claims as follows in accordance with the Revised Format of Amendments under 37 C.F.R. § 1.121.

1. Please cancel claims 2 and 19.

2. Please amend the remaining claims as indicated:

1. (currently amended) In filters fabricated on a birefringent electrooptic substrate, a tunable electrooptic add-drop filter apparatus, the apparatus comprising:

(a) two input single mode waveguides;

(b) a first beam splitter connected to said waveguides;

(c) a polarization converter connected to each of said waveguides after said first beam splitter wherein each said polarization converter includes more than one set of spaced apart, spatially periodic, strain -inducing pads wherein the length of said polarization converter is given by:

$$L_{tot} = N_c L_1 + (N_c - 1) L_2$$

where:

N_c = an integral number of polarization coupling regions of length L_1 and

L_2 = longer regions between said polarization coupling regions in which polarization coupling does not occur;

(d) electrodes in proximity to each said polarization converter;

(e) a second beam splitter connected to said waveguides after said polarization converter; and

(f) two output single mode waveguides connected to said second beam splitter.

2. (canceled)

3.(currently amended) The apparatus of ~~claim 2~~ claim 1 further comprising a plurality of individual strain-inducing pads wherein the spacing between any two such strain-inducing pads is equal to an integer times a particular minimum spacing between adjacent strain-inducing pads.

4 (original). The apparatus of claim 3 wherein widths of the strain-inducing pads are varied.

5. (original) The apparatus of claim 4 wherein said polarization converter has a center and edges and wherein the width of said strain-inducing pads is greater at the center of said polarization converter and tapers monotonically towards said edges.

6.(original) The apparatus of claim 1 further comprising polarization maintaining fibers connected to each input and output single mode waveguide.

7.(original) The apparatus of claim 1 further comprising a plurality of said tunable electrooptic add-drop filters in series.

8.(original) The apparatus of claim 7 wherein said plurality of tunable electrooptic add-drop filters have different values of Nc where Nc is an integral number of polarization coupling regions.

9.(original) The apparatus of claim 1 further comprising a voltage tuner connected to said electrodes.

10.(original) In filters fabricated on a birefringent electrooptic substrate, a tunable electrooptic add-drop filter apparatus, the apparatus comprising:

(a) two input/output single mode waveguides;

(b) a beam splitter connected to the waveguides;

(c) a polarization converter connected to each of said waveguides wherein the polarization converter includes more than one set of spaced apart spatially periodic, strain-inducing pads;

(d) electrodes on the substrate in proximity to each polarization converter; and

(e) a reflector connected to the waveguides after the polarization converter.

11 (original). The apparatus of claim 10 wherein the length of the polarization converter is given by:

$$L_{tot} = N_c L_1 + (N_c - 1) L_2$$

where:

N_c = an integral number of polarization coupling regions of length L_1 and

L_2 = longer regions between said polarization coupling regions in which polarization coupling does not occur.

12.(original) The apparatus of claim 11 further comprising a multiplicity of individual strain-inducing pads wherein the spacing between any two such strain-inducing pads is equal to an integer times a particular minimum spacing between adjacent strain-inducing pads.

13.(original) The apparatus of claim 12 wherein widths of the strain-inducing pads are varied.

14.(original) The apparatus of claim 13 wherein said polarization converter has a center and edges and wherein the width of said strain-inducing pads is greater at the center of said polarization converter and tapers monotonically towards said edges.

15.(original) The apparatus of claim 10 further comprising a voltage tuner connected to the electrode.

16 (original). The apparatus of claim 10 further comprising polarization maintaining fibers connected to each input/output single mode waveguide.

17.(original) The apparatus of claim 10 further comprising an optical circulator connected to each said input/output waveguide.

18.(currently amended) In filters fabricated on a birefringent electrooptic substrate, a tunable electrooptic add-drop filter method, the method comprising the steps of:

(a) providing two input single mode waveguides on said substrate;

(b) connecting a first beam splitter to said waveguides;

(c) connecting a polarization converter to said waveguides after said first beam splitter wherein said polarization converter is conformed to include more than one set of spaced apart, spatially periodic, strain-inducing pads wherein the length of said polarization converter is given by:

$$L_{tot} = N_c L_1 + (N_c - 1) L_2$$

where:

N_c = an integral number of polarization coupling regions of length L_1 and

L_2 = longer regions between said polarization coupling regions in which polarization coupling does not occur;

(d) connecting electrodes to said polarization converter;

(e) connecting a second beam splitter to said waveguides after said polarization converter;

(f) connecting two output single mode waveguides to said second beam splitter;

(g) connecting a voltage tuner to said electrodes; and

(h) applying a voltage to said electrodes through said voltage tuner.

19. (canceled)

20.(currently amended) The method of ~~claim 19~~ claim 18 further comprising the step of connecting a plurality of said tunable electrooptic add-drop filters in series.

21.(currently amended) The method of ~~claim 19~~ claim 18 further comprising the step of replacing step e with the step of adding a reflector to said waveguides after said polarization converter.